

T.Y.B.PHARM. SEMESTER-VI (CBCS - 2015 COURSE) :
SUMMER - 2018

SUBJECT: PHARMACEUTICAL ANALYSIS-IV

Day: **Monday**
Date: **23/04/2018**

S-2018-3934

Time: **10.00 AM TO 01.00 PM**
Max. Marks: **60**

N.B:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining solve **ANY TWO** questions each from Section-I and Section-II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to the both section should be written in **SEPARATE** answer book.

SECTION-I

- Q.1** Attempt **ANY FIVE** of the following: **(10)**
- a) How is the R_f value for a spot on a TLC Plate calculated? What can the R_f value be used for?
 - b) What is HPTLC?
 - c) What could happen if you spot too much of compound on the TLC plate?
 - d) Give the chemical tests for checking adulterants in Tea Powder.
 - e) Give the advantages of band applications of sample over spot applications.
 - f) What would happen if your solvent level is above the level of the initial spots?
- Q.2** a) Discuss the various applications of TLC. **(07)**
b) Give the advantages and disadvantages of TLC. **(03)**
- Q.3** a) Explain in detail development techniques in TLC. **(07)**
b) Give the chemical tests for checking adulterants in spices. **(03)**
- Q.4** Write short notes on **ANY TWO** of the following: **(10)**
- a) Role and responsibilities of Food Inspector
 - b) Advantages and disadvantages of HPTLC
 - c) Adsorbents used in TLC

SECTION-II

- Q.5** Attempt **ANY FIVE** of the following: **(10)**
- a) Explain the term Critical point in SFC.
 - b) Define the term Selectivity factor and Retention time.
 - c) Why Reverse Phase HPLC is used more than Normal phase HPLC?
 - d) What do you understand by a bulk property and solute property detector?
 - e) Give the properties of Carbon dioxide as a supercritical fluid.
 - f) Give the difference between Isocratic and Gradient elution techniques.
- Q.6** a) Discuss in detail pumps used in HPLC. **(07)**
b) Explain in brief about sample injector system in HPLC. **(03)**
- Q.7** a) Discuss the instrumentation of SFC. **(07)**
b) Give in brief the principle involved in SFC. **(03)**
- Q.8** Write short notes on **ANY TWO** of the following: **(10)**
- a) Columns used in HPLC
 - b) Applications of SFC
 - c) UV- Visible Detector and RI Detector in HPLC

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